

## Maternal, Infant and Child Health

### Data Analysis

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#### Early prenatal care

|   |    |
|---|----|
| • Avg. rate per 100 live births, 2000–2002. |    |
| Tompkins.....                               | 77 |
| Cayuga.....                                 | 79 |
| Cortland.....                               | 83 |
| Onondaga.....                               | 76 |
| Tioga.....                                  | 80 |
| CNY.....                                    | 77 |
| NYS.....                                    | 73 |
| HP2010.....                                 | 90 |

Early prenatal care — mothers who visit a health care provider within the first 3 months of a pregnancy — is an important health indicator for infants and mothers. It is considered a significant measure of healthy birth outcomes. The healthy People 2010 (HP2010) target, recorded as a percentage of live births, is 90.

Tompkins County women get early prenatal care at about the same rate as women in neighboring counties, and the Central New York (CNY) region as a whole. Over a ten year span from 1993 to 2002, the rate for Tompkins County has remained relatively steady; up a little in the mid nineties, down a little in the latter part of the period. (*See Figure 137 and Figure 138, page 151.*) Considering this pattern, the HP2010 target may be considered an elusive goal for Tompkins County.

#### Early prenatal care

|   |      |
|---|------|
| • Avg. rate per 100 live births, 1993–2002. |      |
| Groton.....                                 | 79.5 |
| Tompkins total.....                         | 75.1 |
| Caroline.....                               | 70.6 |

Data for early prenatal care is also available by ZIP code for Tompkins County. In Figure 139, page 152, where ZIP codes have been combined by Town, it can be seen that this health indicator is relatively uniform across the county; a little higher in Groton, a little lower in Caroline. *Table 14, page 153* shows the data in greater detail. Note that these data are averaged over the period 1993–2002.

#### Postneonatal mortality

|   |     |
|---|-----|
| • (Age 28 days–1 yr.)                       |     |
| Avg. rate per 1,000 live births, 2000–2002. |     |
| Tompkins.....                               | 3.6 |
| Cayuga.....                                 | 1.1 |
| Cortland.....                               | 1.2 |
| Tioga.....                                  | 1.7 |
| CNY.....                                    | 2.2 |
| NYS.....                                    | 1.8 |
| HP2010.....                                 | 1.2 |

Infant mortality refers to deaths of children under age one year. This indicator is further divided into Neonatal (age 0–28 days) and Postneonatal (age 28 days to one year) mortality. These data are recorded as rate of deaths per 1,000 live births.

In Tompkins County the postneonatal mortality rate is 63 percent higher than the total for Region 3, Central New York (CNY.) Statewide, Tompkins has the eighth highest postneonatal mortality rate, based on the average for 2000–2002. Since postneonatal mortality is a component of infant mortality, the latter rate is also elevated in comparison to neighboring counties. (*See Figure 140, page 153 through Figure 142, page 154.*)

A review of the ten years between 1993 and 2002 shows wide fluctuations in Tompkins' postneonatal mortality rate (*see Figure 143, page 155,*) with an especially apparent spike in the year 2000. Because the relatively small, single county numbers are prone to show prominent dips and spikes, it is often useful to look at trends by 3-year averages. However, even here the rates remain above the Upstate New York totals over the 10 year period.

Neonatal mortality trends are shown in *Figure 144, page 155*. Infant mortality is the total of neonatal and postneonatal deaths.

**Spontaneous fetal deaths**

- Avg. rate per 1,000 live births, 2000–2002.

|                |     |
|----------------|-----|
| Tompkins ..... | 3.6 |
| Cayuga .....   | 4.9 |
| Cortland ..... | 8.9 |
| Tioga .....    | 2.2 |
| CNY .....      | 6.9 |
| NYS .....      | 7.7 |
| HP2010.....    | 4.1 |

Spontaneous fetal deaths are deaths that occur at 20 or more weeks of gestation and are reported as a rate per 1,000 live births. Although the records show a couple of years when the spontaneous fetal death rate was relatively high in Tompkins County (1993 and 2000,) the general trend is for this rate to be below those for neighboring counties, the CNY region, and the state as a whole. (See Figure 145, page 156 and Figure 146, page 156.)

Tompkins County is also under the HP2010 target rate of 4.1 spontaneous fetal deaths per 1,000 live births.

**Short Gestation**

- Avg. rate per 100 live births, 2000–2002.

|                |      |
|----------------|------|
| Tompkins ..... | 9.9  |
| CNY .....      | 11.3 |
| NYS .....      | 11.5 |
| HP2010.....    | 7.6  |

Pregnancies that last under 37 weeks (about eight and a half months) are tabulated as “Short gestation,” and expressed as a rate per 100 live births. In Tompkins County the rate for short gestations is below that of neighboring counties, though it is likely that the difference is not significant. Tompkins County is not yet as low as the HP2010 target, and the 10 year trend, which is essentially flat, shows no track toward achieving that target. (See Figure 147, page 157 and Figure 148, page 157.)

**Maternal Mortality**

- Avg. rate per 100,000 live births, 2000–2002.

|                |      |
|----------------|------|
| Tompkins ..... | 39.6 |
| Onondaga ..... | 11.5 |
| CNY .....      | 8.0  |
| NYS .....      | 16.1 |
| HP2010.....    | 3.3  |

Maternal mortality is very rare in New York State. In fact, among the 55 Upstate counties only 20 maternal deaths were recorded during the 3-year period, 2000–2002. Unfortunately, one of those deaths occurred in Tompkins County in 2002. Records show maternal mortality here was zero from 1991–2001.

Incidence rates for maternal mortality are calculated per 100,000 live births. In Tompkins County where there were 2,525 births from 2000–2002, one maternal death resulted in an average rate of 39.6. Taking into account the raw data of one death in 12 years, the 2000–2002 rate should probably be interpreted cautiously.

**Birthweight**

Birth weight is recorded at every delivery, making this one of the most reliable of all community health indicators. The cut-off number for classification as “Low Birthweight” (LBW) is 2500 grams (about five and a half pounds.) Infants weighing in under 1500 grams (about 3-1/3 pounds) are considered to be “Very Low Birthweight,” or VLBW. Both indicators are described as a rate per 100 live births.

**Very Low Birthweight**

- Avg. rate per 100 live births, 2000–2002

|                |     |
|----------------|-----|
| Tompkins ..... | 1.5 |
| CNY .....      | 1.5 |
| HP2010.....    | 0.9 |

In Tompkins County the rate for VLBW is right in line with neighboring counties, the CNY region and the state as a whole. And this rate has remained essentially constant over the 10 year period, 1993–2002. The Tompkins County rate needs to decline by about 40% to reach the HP2010 target.

For the LBW indicator Tompkins shows somewhat better regionally, though it still surpasses the HP2010 target. The 10 year trend is flat. (See

**Low Birthweight births**

- Avg. rate per 100 live births, 1993-2002.

|                 |      |
|-----------------|------|
| Tompkins.....   | 6.3  |
| T-Caroline..... | 7.6  |
| T-Danby.....    | 10.2 |
| T-Enfield.....  | 8.2  |
| HP2010.....     | 5.0  |

*Figure 149, page 158, and Figure 150, page 158.)*

LBW data is also available in greater detail within the county. *Figure 151, page 159*, shows 10-year data by Tompkins County town. For the most part there is little variation among towns. The exception is the Town of Danby, and to a lesser extent the Towns of Enfield and Caroline. All areas are above the HP2010 target of 5.0 percent low birthweight births, though some by such a narrow margin that it may be within a margin of error.

It is difficult to attempt an explanation for these data. Typically, low birthweight births can be an indicator of lower socio-economic status. Low birthweight can also result from later initiation of prenatal care, maternal smoking or maternal age.

In this case, poverty data does not seem to correlate (*see Figure 152, page 159.*) However, caution is advised in this comparison since the poverty data shown is from 1999 (2000 U.S. Census) and the LBW data is averaged over 10 years, from 1993–2002. Also, as pointed out in an earlier section, the influence of students on Tompkins County poverty statistics can add to uncertainty in how to interpret data.

## Community Resources

**WIC**

In Tompkins County, the federally funded Supplemental Nutrition Program for Women, Infants and Children (WIC) is administered by the Tompkins County Health Department. TC WIC nutrition staff emphasize the benefits of breastfeeding with all prenatal women. Using a locally developed questionnaire, detailed information in breastfeeding is collected from all prenatal women who enroll in WIC.

Data collected from 1997–2003 is shown in *Figure 153, page 160*. The 7-year trend shows some increase in the number of WIC mothers who initiate breastfeeding, though a decrease in the women who are still breastfeeding at 6 months.

Though these data provide a valuable addition to the cache of community health indicators the reader should remember that they only represent those women who are eligible and have enrolled in the TC WIC program. This is the only measure available and does not account for breastfeeding initiation and maintenance of other women not enrolled in WIC.

**Medicaid Obstetric and Maternal Services (MOMS)**

This program located at the Tompkins County Health Department

(TCHD) provides services for prenatal women and their partners. Income eligibility for this program is less stringent than typical Medicaid requirements. Clients receive education through class instruction and nurses provide one on one counseling. The unduplicated client count in 2002 was 509; in 2003 it was 574. The total number of births to women in Tompkins County in 2002 was 794; in 2003 it was 920.

### **Maternal Child Home Visiting Program**

Nurses in TCHD's Maternal Child Unit visit mothers, babies, and children in their homes upon physician requirement. During home visits, nurses assess blood pressure, pulse respiration, lung sounds, weights, and fetal heart sounds. Mothers are taught about healthy pregnancy, breast-feeding, infant care, childhood health and development, immunization, chronic disease. In 2002 the unduplicated client count was 196 with 572 home visits. In 2003 the client count was 141 with 407 home visits.

### **Medical Care — Highlights**

There are 2 obstetrical/gynecological medical practices in Ithaca and one family practice office that provide obstetrical care.

Cayuga Medical Center at Ithaca's Special Care Nursery acquired a Level II designation from the New York State Department of Health. This means that babies born at the medical center who require short-term assistance breathing and other neonatal services such as oxygen support and intravenous therapy can receive their care in Tompkins County. As of 2003, the Special Care Nursery cares for babies born up to eight weeks premature or at a minimum weight of 1,500 grams (the equivalent weight of 3 pounds, 5 ounces). Babies weighing less than 1,500 grams or who need surgery are transferred to a regional medical center with Level III Nursery designation.

TCHD partners with Mothers and Babies Perinatal Network of the Southern Tier regarding access to prenatal care and smoking cessation among prenatal women. They provide the education and support to make smoking cessation a success.

## **Opportunities for Action**

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Continue efforts to achieve the HP2010 goal of 90% of pregnant women seeking and receiving prenatal care. Health care professional should continue to urge all pregnant women to avoid tobacco.

## Figures and Tables

Figure 137 — Early prenatal care, regional comparison

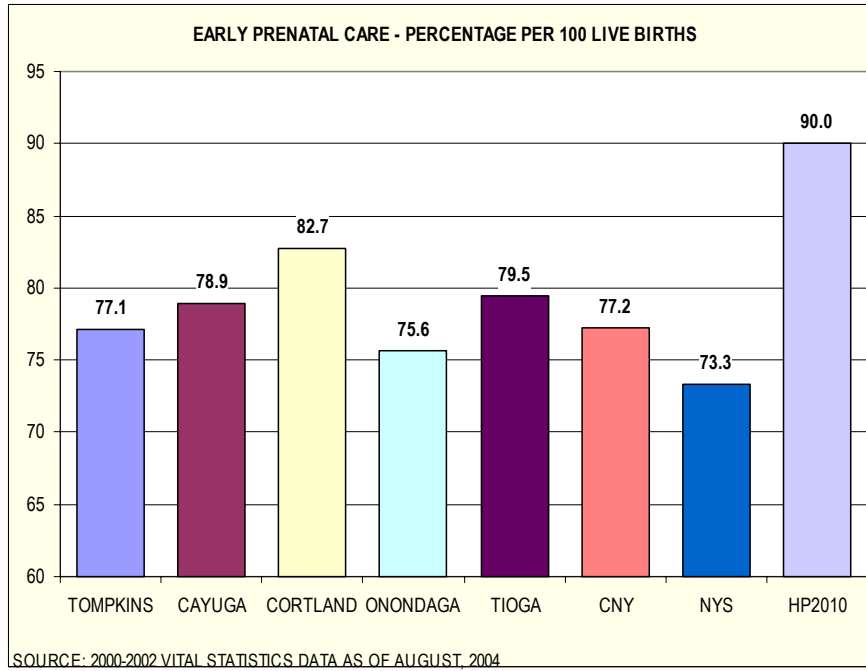


Figure 138 — Early prenatal care, 10-year trend

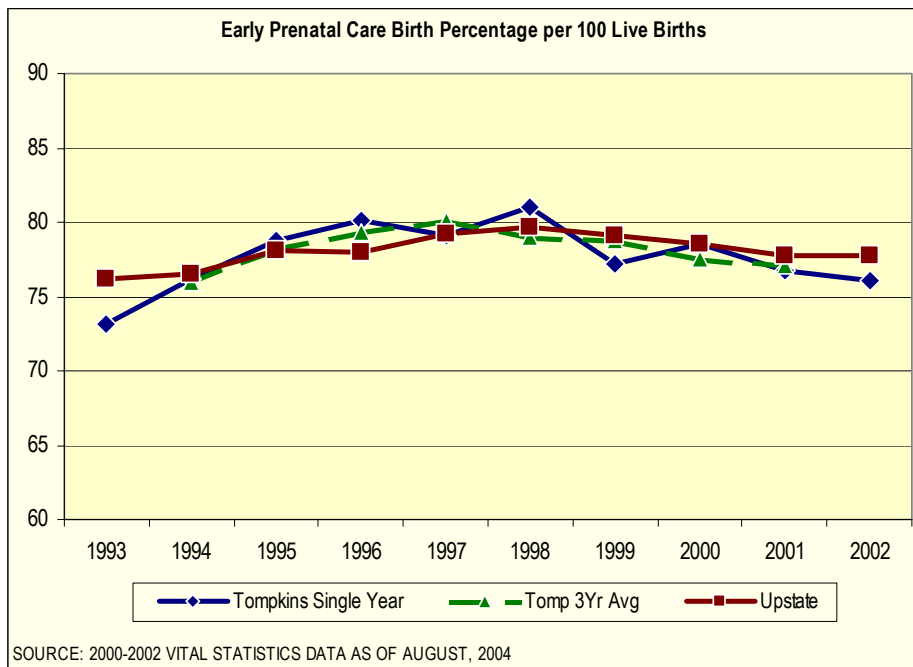


Figure 139 — Early prenatal care, by Tompkins County ZIP code

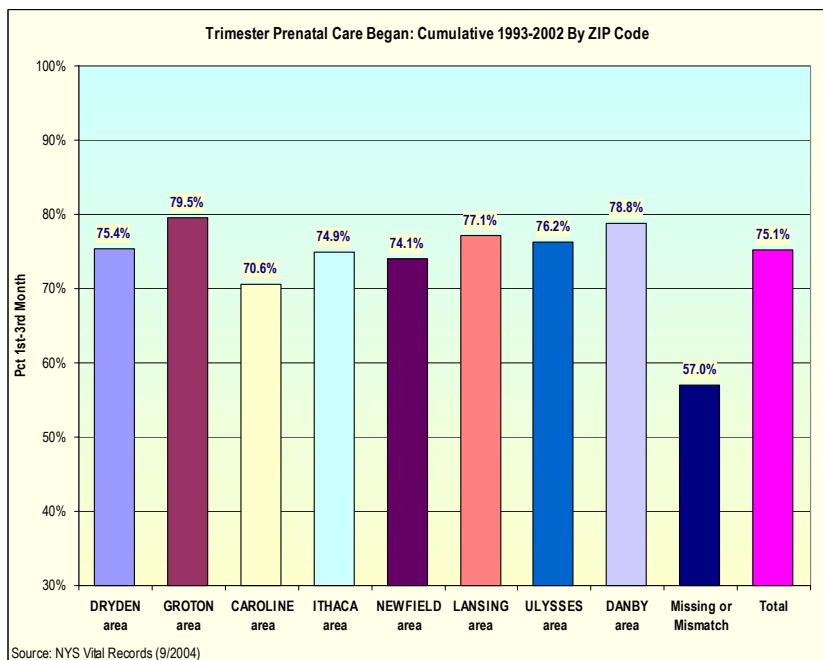


Table 14 — Early prenatal care, by Tompkins County ZIP code

| Total Births<br>1993–2002 | 1st-3rd Month |       |   |                     |
|---------------------------|---------------|-------|---|---------------------|
|                           | Freq          | Pct   |   |                     |
| 1,194                     | 900           | 75.4% | DRYDEN-ETNA-FREEVILLE                         | DRYDEN area         |
|                           |               |       |   |                     |
| 708                       | 563           | 79.5% | GROTON-MC LEAN                                | GROTON area         |
|                           |               |       |   |                     |
| 327                       | 231           | 70.6% | BROOKTONDALE-BERKSHIRE-SLATERVILLE SPRINGS    | CAROLINE area       |
| 5,042                     | 3,777         | 74.9% | ITHACA  | ITHACA area         |
|                           |               |       |   |                     |
|                           |               |       |   |                     |
| 772                       | 572           | 74.1% | NEWFIELD                                      | NEWFIELD area       |
|                           |               |       |   |                     |
| 398                       | 307           | 77.1% | LANSING                                       | LANSING area        |
|                           |               |       |   |                     |
| 391                       | 298           | 76.2% | TRUMANSBURG-MECKLENBURG-JACKSONVILLE          | ULYSSES area        |
| 99                        | 78            | 78.8% | WEST DANBY-SPENCER-WILLSEYVILLE               | DANBY area          |
| 79                        | 45            | 57.0% | Missing Zipcode-Zipcode and County Mismatched | Missing or Mismatch |
|                           |               |       |   |                     |
| 9,010                     | 6,771         | 75.1% | TOTAL   | Total               |

NYS Vital Statistics (Sept 2004)

Figure 140 — Postneonatal mortality, regional comparison

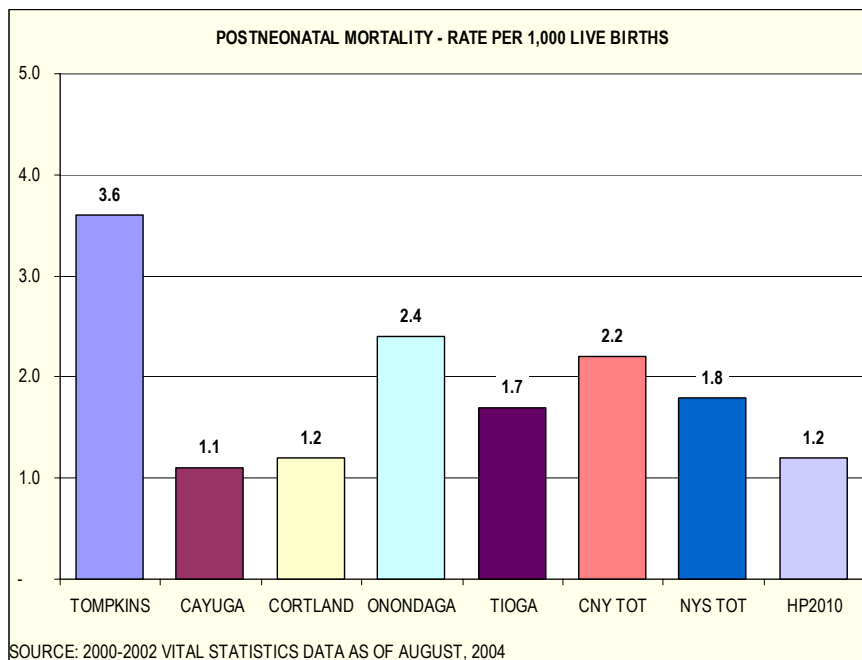


Figure 141 — Neonatal mortality, regional comparison

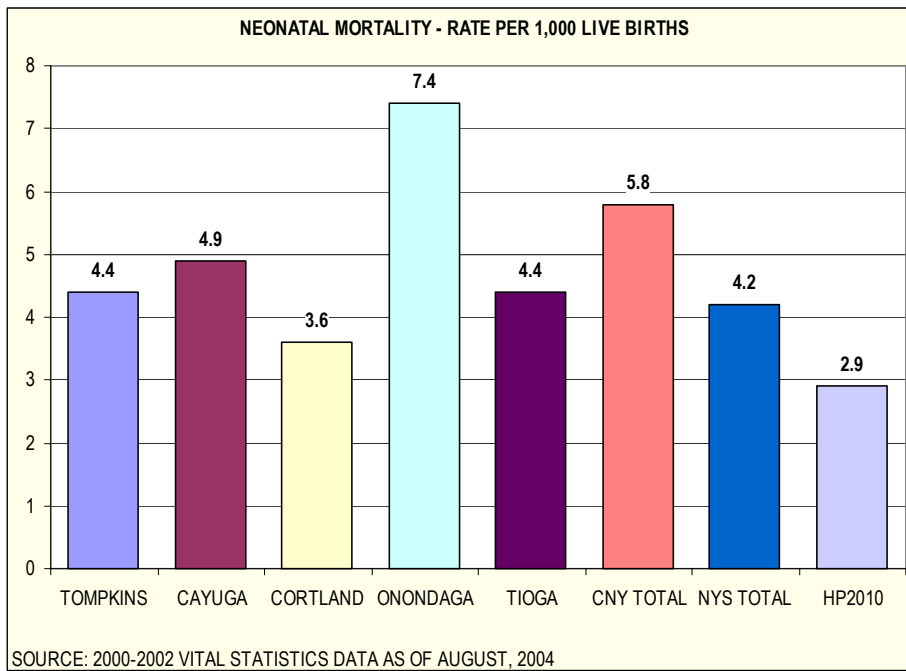


Figure 142 — Infant mortality, regional comparison

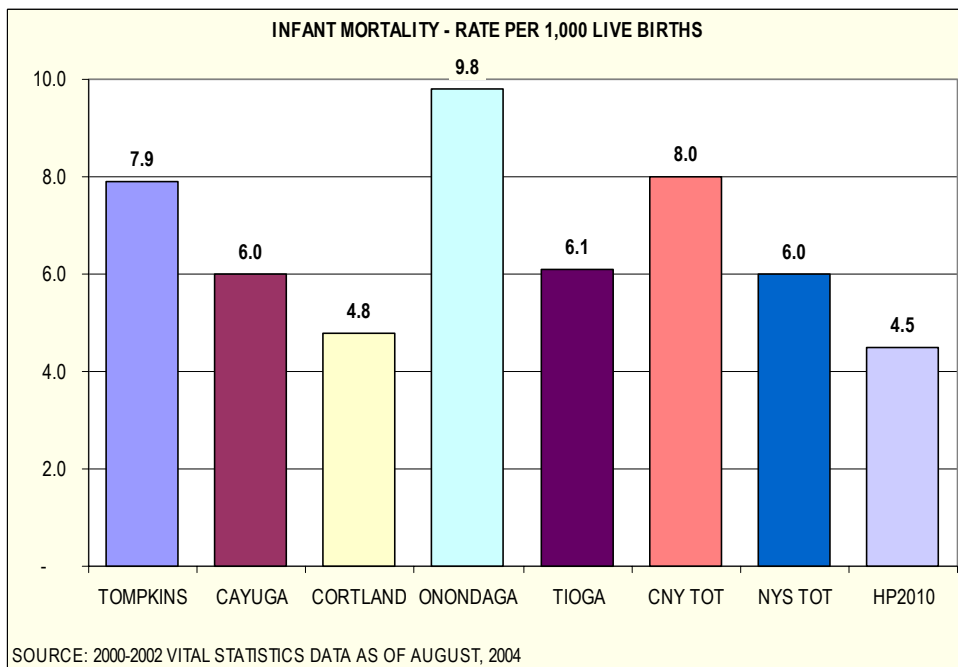




Figure 143 — Postneonatal mortality, 10-year trend

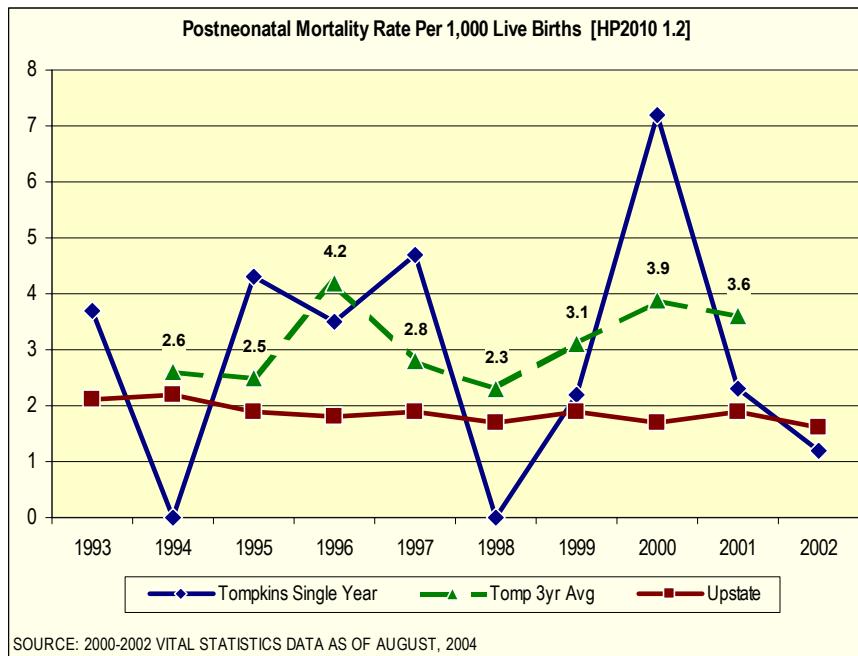


Figure 144 — Neonatal mortality, 10-year trend

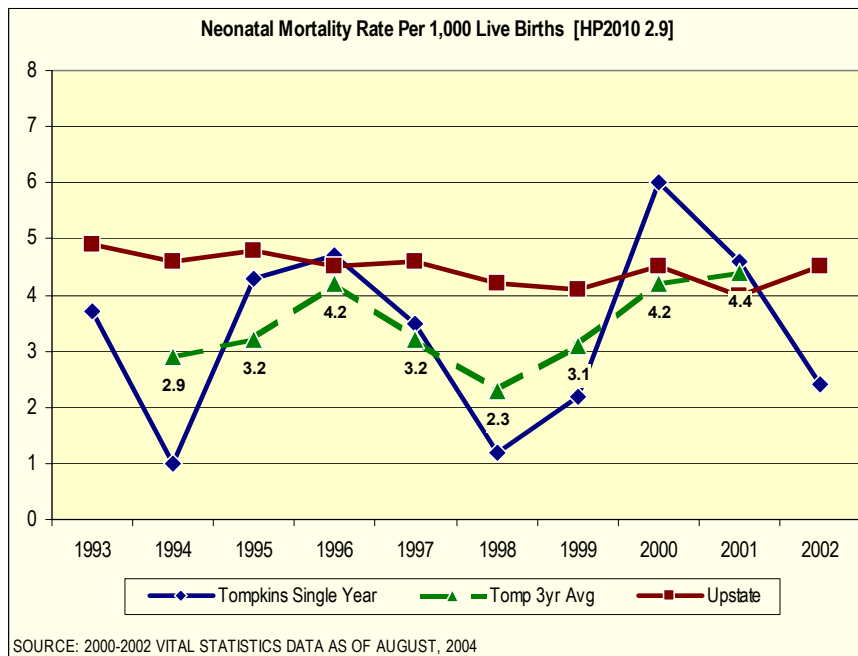


Figure 145 — Spontaneous fetal deaths, 10-year trend

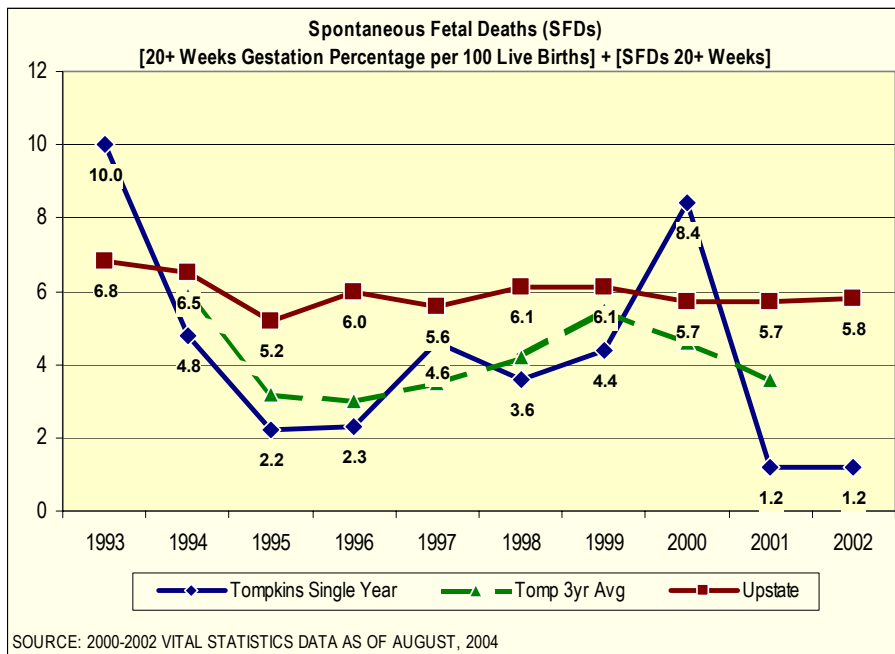


Figure 146 — Spontaneous fetal deaths, regional comparison

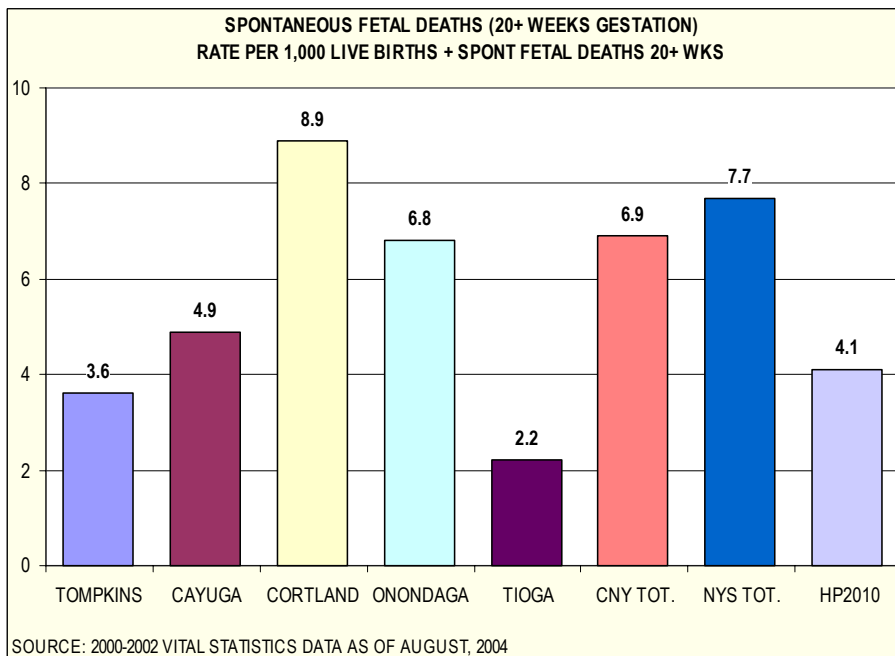


Figure 147 — Short gestation, regional comparison

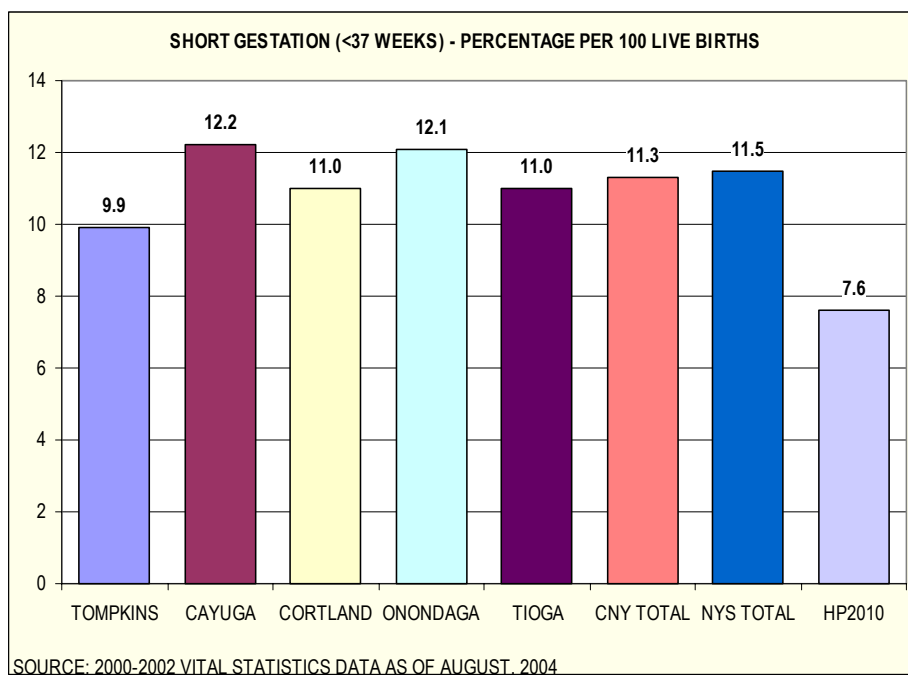


Figure 148 — Short gestation, 10-year trend

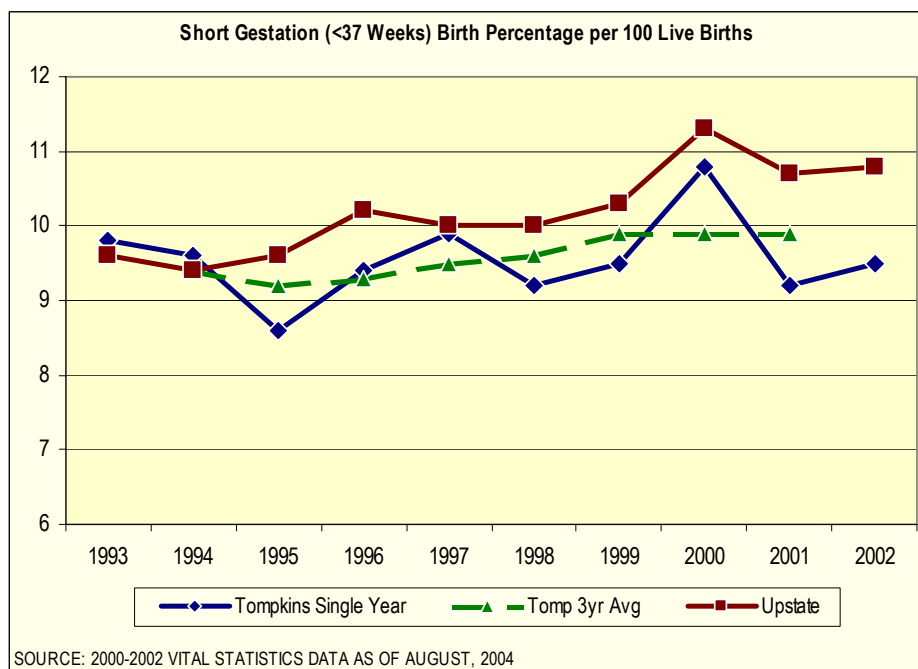


Figure 149 — Low birthweight births, regional comparison

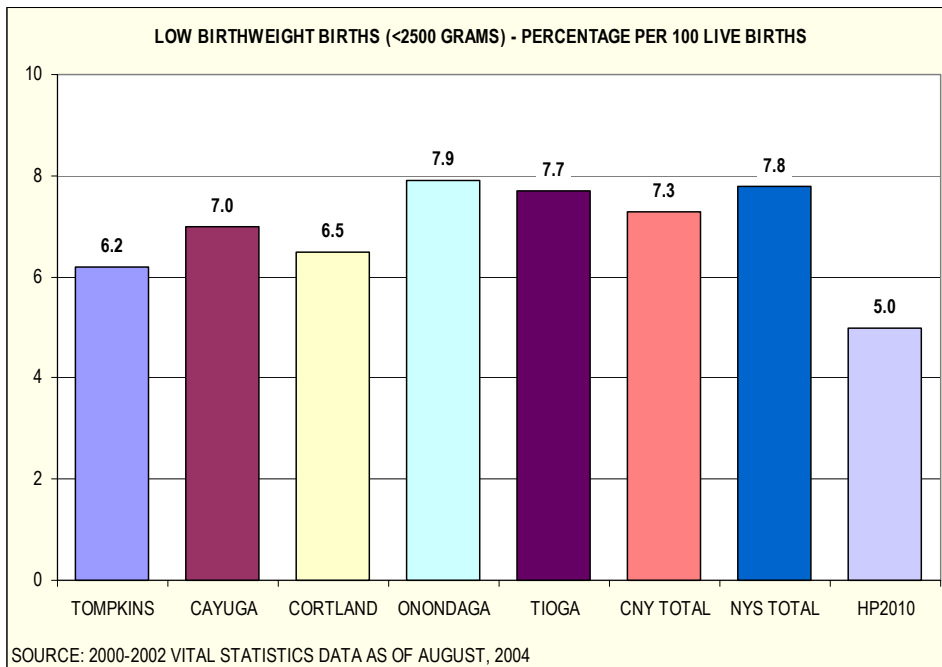


Figure 150 — Low birthweight births, 10-year trend

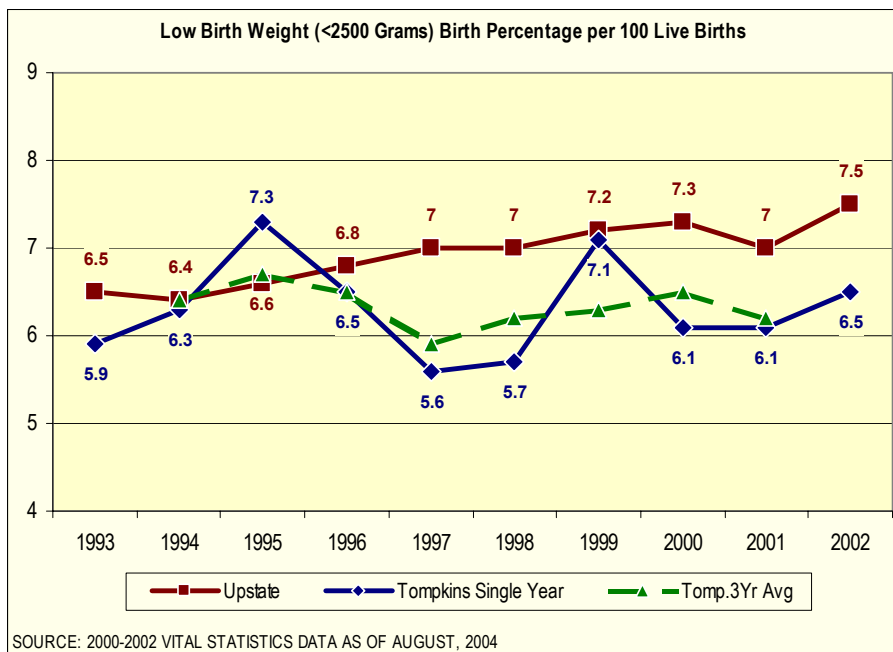


Figure 151 — Low birthweight births, by Tompkins County town

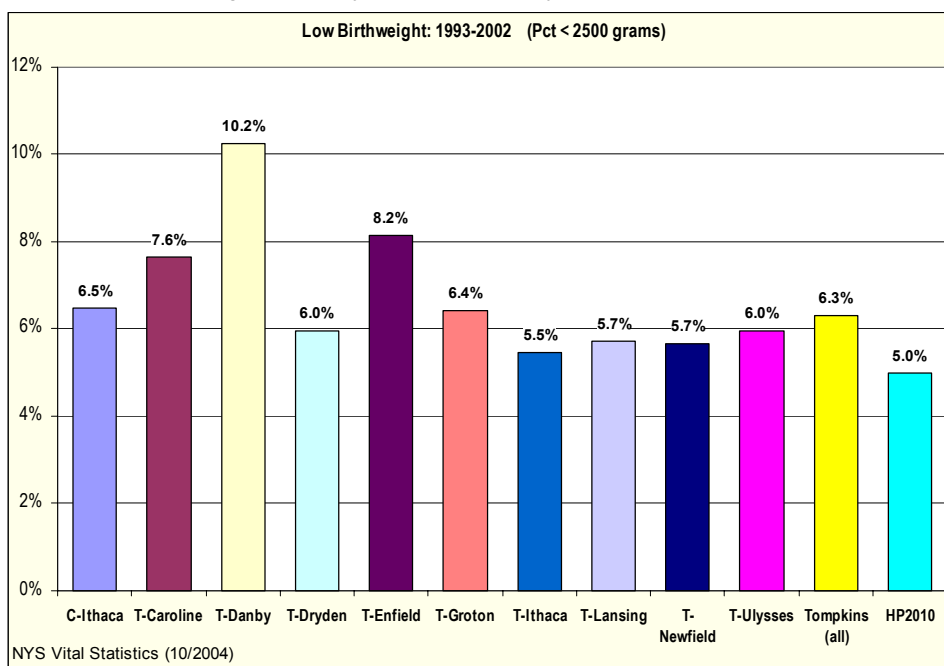


Figure 152 — Families in poverty, by Tompkins County town

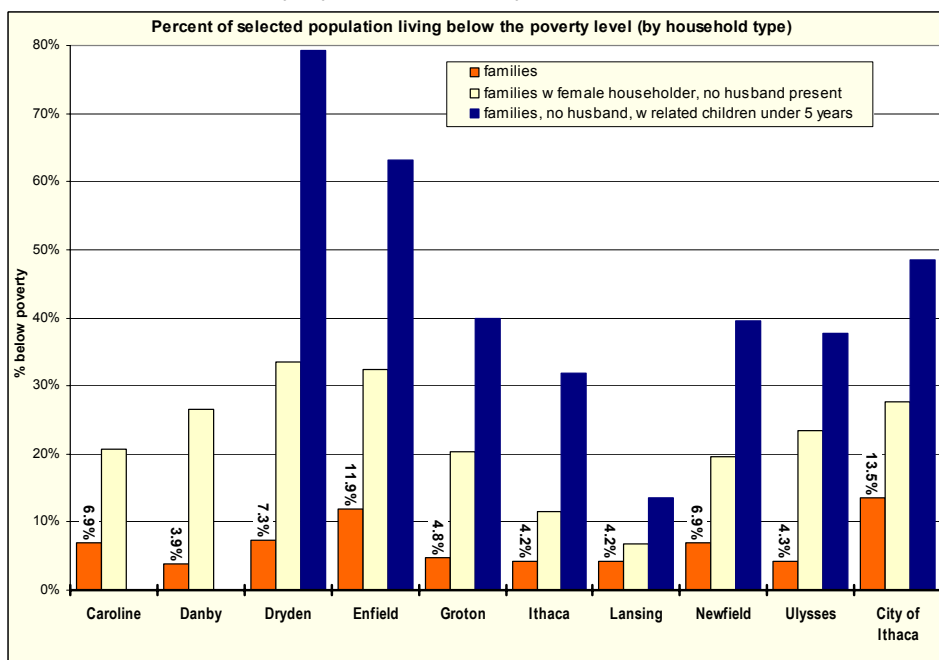


Figure 153 — Breastfeeding, Tompkins County

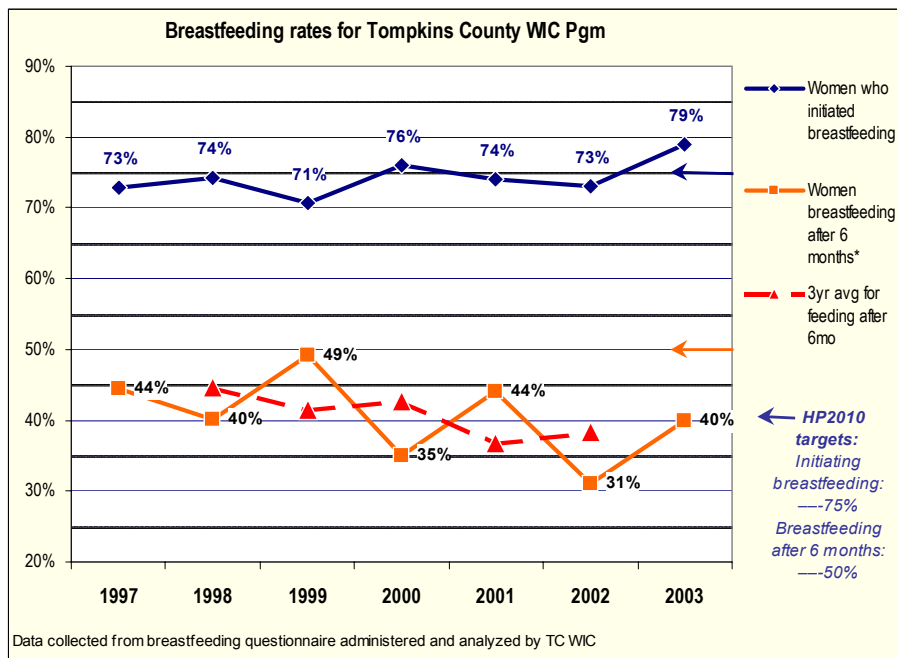


Table 15 — Lead poisoning incidence, Tompkins County

**Lead Prevention Program in Tompkins County**

| Year                                 | 1998  | 1999 | 2000 | 2001  | 2002  | 2003  |
|--------------------------------------|-------|------|------|-------|-------|-------|
| Children (<6yrs) tested for lead     | 1,081 | NA   | NA   | 1,272 | 1,273 | 1,258 |
| Blood level >10 mcg/dl               |       | 6    | 8    | 3     | 14    | 6     |
| Blood level >20 mcg/dl               | 2     | 1    | -    | 2     | -     | -     |
| Sites inspected related to >10 cases |       | 6    | 7    | 3     | 13    | 8     |
| Abatements completed                 |       | -    | -    | -     | -     | -     |
| Interim controls completed           |       | -    | -    | 1     | -     | -     |
| Lead source identified               |       |      |      | 4     | 9     | 6     |

Source: TCHD Annual Reports (EH, MCU)